

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-30 are pending in the present application, Claims 1, 2, 6-10, 12-15, and 17-26 having been amended, and Claims 3 and 27 having been canceled without prejudice or disclaimer. Applicants respectfully assert that support for the changes to Claims 1, 2, 6-10, 12-15, and 17-26 is self-evident from the originally filed disclosure and that no new matter is added.

In the outstanding Office Action, Claims 1-14 and 21-30 were rejected under 35 U.S.C. §102(b) as anticipated by Cox et al. (U.S. Patent No. 5,930,369, hereinafter Cox); and Claims 15-20 were objected to for depending from a rejected base claim, but were otherwise indicated as including allowable subject matter.

Applicant thanks the Examiner for the indication of allowable subject matter.

Initially, with respect to the Information Disclosure Statement (IDS) filed on December 6, 2001 that did not include copies of the references listed in "Other Prior Art" section, Applicant is filing a new IDS with the present amendment to have these references considered by the Examiner. This new IDS includes copies of the documents listed thereon. Applicant respectfully requests that the Examiner consider the references cited on the IDS and provide the undersigned an initialed copy of the PTO-Form 1449.

With respect to the rejection of Claim 1 as anticipated by Cox, Applicant respectfully submits that the amendment to Claim 1 overcomes the outstanding ground of rejection.

Amended Claim 1 recites

An apparatus comprising:

an inverse transformer for transforming transform
domain watermark data comprising a plurality of transform
domain coefficients into spatial domain watermark data

comprising a plurality of spatial domain pixels which form spatial domain watermark data; and

a combiner for receiving material in the spatial domain, the material comprising a plurality of spatial domain pixels and combining the pixels of said spatial domain watermark data with the spatial domain pixels of said material in the spatial domain to form watermark data embedded material.

Cox does not describe or suggest amended Claim 1.

In a non-limiting embodiment of the claimed invention, a watermark is formed in the transform domain. An inverse transform is performed on watermark data, so that the inverse transform creates a spatial domain version of the watermark data. The watermark data is then combined in the spatial domain with the material to be watermarked. As disclosed in the specification, the claimed invention has an advantage in that a transformation is not performed on the material to be watermarked.¹

On the contrary, Cox discloses at col. 14, lines 1-14 (with reference to Fig. 7), that the image 52 is transformed by a transforming lens 54 and combined with a watermark which is itself transformed by a transforming lens 58 to form a composite watermarked image in the transform domain. The composite watermark image is then inverse transformed by lens 62 back into the spatial domain. Therefore, Cox clearly discloses that the image to be watermarked is transformed into the transform domain in order to perform the watermarking.

Cox discloses that spatial transform lenses 54 and 58 are Fourier transform lens.² Cox confusingly describes the transforming lenses as a “spatial transform” lens 54 and a second “spatial [transform]” lens 58.³ Although Cox refers to the lenses 54 and 58 as spatial transform lenses, it is clear from col. 14, lines 1-4 of Cox that image 52, which is to be

¹ Specification, page 2.

² Cox, col. 14, lines 2-5.

³ Applicant notes that Cox recites “second spatial transfer lens,” and respectfully submits that the word “transfer” is an error, and should be “transform.”

watermarked, and watermark 56 are transformed *from* the spatial domain *into* the transform domain. Thus, the term “spatial transform” is referring to the form of the *target* of the transform and not the form of the *result* of the transform.

Applicant notes that Cox discloses that transform lens 54 is a Fourier transform lens. Applicant submits that the Fourier transform lens is used to convert an image in the spatial transform domain into a Fourier transform domain to produce a distribution of spectral frequency components. In support of this position, Applicant notes that U.S. Patent No. 5,848,155, which is already of record, describes the use of a Fourier transform lens. The 5,848,155 patent states “image 10 is first transformed into a *spatial frequency representation* 12, for instance by a discrete cosine transform (DCT), other transforms such as a fast *Fourier transform* could be used...After being combined, the modified image is then inverse transformed back into the *spatial domain* to create the watermarked image.”⁴ Thus, the 5,848,155 patent discloses that the Fourier transform lens is used to convert an image in the spatial transform domain into a Fourier transform domain to produce a distribution of spectral frequency components.

Furthermore, Applicants note that Cox also discloses inverse spatial transform lens 62, which returns the watermarked image back to the spatial domain.

In addition, Claim 1 is amended to more clearly describe and distinctly claim the subject matter which Applicant regards as the invention. Amended Claim 1 describes that the transform domain watermark data comprises a plurality of transform domain coefficients. Amended Claim 1 also describes that the spatial domain material comprises a plurality of spatial domain pixels. Furthermore, a result of the inverse transform is to transform the transform domain watermark data comprising a plurality of transform domain coefficients into spatial domain watermark data comprising a plurality of spatial domain pixels which

⁴ U.S. Patent No. 5,848,155, col. 3, lines 10-22.

form a spatial domain watermark. Cox does not disclose or suggest these elements of amended Claim 1.

In view of the above-noted distinctions, Applicants respectfully submit that Claim 1 (and Claims 2, 4-20) patentably distinguish over Cox. In addition, Applicants respectfully submit that amended Claim 21 is similar to amended Claim 1. Accordingly, Applicants respectfully submit that amended Claim 21 (and Claims 22-26 and 28-30) patentably distinguish over Cox, for at least the reasons stated for Claim 1.

With respect to the use of Official Notice in the outstanding Office Action, Applicant notes that Official Notice may be taken for facts outside of the record which are capable of instant and unquestionable demonstration as being "well-known" in the art. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). As set forth in MPEP § 2144.03, if an Applicant traverses an assertion made by an Examiner while taking Official Notice, the Examiner should cite a reference in support of their assertion.

In addition, Applicant respectfully traverses those grounds for rejection relying of Official Notice. Applicants do not consider the features for which Official Notice were taken to be "of such notorious character that official notice can be taken." Therefore Applicants traverse this assertion. "The examiner should cite a reference in support of his or her position."⁵

⁵MPEP 2144.03, page 2100-129, left column, second full paragraph of MPEP 2144.03.

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Consequently, in light of the above discussion and in view of the present amendment,
the present application is believed to be in condition for allowance and an early and favorable
action to that effect is respectfully requested.

Respectfully submitted,

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